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**Aerospace  
Industries  
Association**



October 24, 2000

Docket Management System  
U.S. Department of Transportation  
Room Plaza 401  
400 Seventh Street, S.W.  
Washington, DC 20590-0001

ref: Docket No. FAA-2000-7587 – Noise Certification Standards for Subsonic  
Jet and Subsonic Transport Category Large Airplanes; Proposed Rule

Dear Sir or Madam:

The Aerospace Industries of America appreciates the opportunity to respond to the above reference proposed rule. Comments were due to the FAA by October 10, 2000, and are being submitted after having been granted a verbal waiver.

AIA endorses FAA efforts to harmonize U.S. and European regulations, and submits the attached comments for consideration.

Sincerely,

Howard Aylesworth  
Director, Air Traffic Systems and  
Aircraft Noise and Emissions

**COMMENTS ON NPRM 00-08**

**DOT Docket No.: FAA-2000-7587**

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**1.0 GENERAL**

FAA , through this NPRM, has come considerably closer to a proposal for 14CFR Part 36 that would , if adopted by the United States Government, improve compatibility with the Noise Standards prescribed in ICAO Annex 16, Volume 1. However, after review of this document, comments are provided on the following categories of issues to urge FAA to go considerably further towards true harmonization with Annex 16 noise standards and associated guidance material than they have done so far in the preparation of this NPRM.

**1. Residual NPRM language differences from Annex 16**

- Differences with unknown impact
- FAA differences with questionable improvement to document
- FAA differences representing additional or dissimilar requirements

**2. FAA position on compatibility with ICAO noise standards**

**3. 14CFR Part 36 guidance material**

**2. Discussion**

**2.1 Residual Language Differences**

2.1.1 **Unknown Impact** -- This category includes, in addition to Subparts A, B, and O, typos and word omissions, use of the command word "must" instead of "shall" found throughout the document. Examples of Subpart changes, presented in the NPRM, with typos and word omissions or displacements are no labeling of Subpart A, e (3) (ii) instead of e(3)(iii) and no e (3) (vi) in 36.6, reference to appendix C under 36.103 in stead of appendix B and no Subpart O label next to 36.1581.

2.1.2 **FAA differences with questionable improvement to document** -- The language in at least the following example sections of the NPRM does not follow one-on-one with that of Annex 16.

A36.3.1.15 Note

A36.3..3 Note

A36.3.6.3 1st sentence and Note

A36.3.6.5 1st sentence and Note 2

A36.3.8

A36.3.7.2 ( c )

A36.3.7.3 1st sentence

A36.3.9.5 Any changes----

A36.3.9.7 Changes---

- A36.4.1.2 ( a ) 1st sentence
- A36.4.3.1 ( a ) Step 1
- A36.5.1.3 Both sentences
- A36.5.2.1 Applicant must report (redundancies)
  - 5.2.2
  - 5.2.3
  - 5.2.4
  - 5.2.5
- A36.5.4 Validity of ---
- A36.9.3.2 ( a ) Include noise time history----
  - ( b ) For lateral noise--- (belongs under 2 ( ii)
- A36.9.3.3.2 Last sentence ( A sufficient number---)

A typical applicant or certificating authority who reads the proposed 14CFR Part 36 language in these typical sections would find it difficult not to at least question in his mind as to whether they really said and meant the same thing as Annex 16 language. For this reason, the benefits that the FAA is attempting to achieve in the context of "plain language" are highly questionable in relation to true one-on-one language benefits that would be much less likely to be misinterpreted.

- 2.1.3 **FAA differences representing additional or dissimilar requirements**—The following sections are examples that include FAA requirements stated in the NPRM that either are or can easily be interpreted to be different than those in Annex 16.

- A36.2.2.2 Wind speed
- A36.3.6.3 Last sentence of Note
- A36.3.7.5 Incorrect equations
- A36.3.9.10 Wind screen insertion loss
- A36.3.9.11 Ambient noise—test run
- A36.3.9.12 Method approved—advisory circular
- A36.4.3.1 Step 10 Last sentence ( other methods—approved)
- A36.4.5.5 For those cases—duration time
- A36.5.4.2 90 percent—this part
- F ( i, k ) Background Spl—absence of tone
- A36.7.3 Quadratic interpolation—where necessary
- B36.7 ( a ) (4) Reserved (A16 text 3.6.1.4)

The differences that an applicant would ascertain between the proposed 14CFR Part 36 requirements and those of Annex 16 would be counterproductive to FAA's stated goal of internationalization of noise certification standards. These differences, if maintained, would also make it much more difficult and costly to applicants that might want reciprocal approvals by different certificating authorities.

- 2.1.4 **FAA position on compatibility with ICAO noise standards**—The preamble to the NPRM suggests that FAA is willing to simply file differences between 14CFR Part 36 noise standards and ICAO noise standard and maintain that status because it had not been possible to reach agreement on some items in

the ARAC Harmonization Working Group. The FAA is urged to review the proposed NPRM to re-assess their position on achieving full compatibility with ICAO noise standards. All items that have not been agreed upon by the Harmonization Working Group should be identified as technical issues to be studied and resolved by appropriate task groups within ICAO CAEP Working Group 1.

AIA supports FAA's recognition of incompatibility of current 14CFR Part 36 with ICAO Annex 16 and JAR 36 regarding the date to be used in determining the applicability of appropriate noise standards relative to type certificate application dates. However, simply removing Section 36.2, as the NPRM proposes, clearly does not solve the incompatibility problem. In fact, it is highly questionable that FAA really means "harmonize with the applicability designation of part 36 with that contained in Section 1.7 of ICAO Annex 16, Chapter 1" since it is our understanding that neither the FAA or European certifying authorities would approve noise certification of an aircraft based upon "date of application for the certificate of airworthiness for the prototype". If FAA means they are trying to be compatible with "another equivalent procedure prescribed by the certifying authority", then a lot more clarification is needed in the NPRM as to what exactly that means.

AIA understands that if reference to 14CFR Part 36 is removed from 14CFR Part 21, Section 21.17, then the 14CFR noise standards would be those at the date of initial application for a type certificate which is good for 5 years but may be extended and move the appropriate noise standards to be 5 years prior to the end date of the extension. It is not clear how the FAA would propose to handle the date for applicable noise standards for type design changes if reference to 14CFR Part 36 is removed from 14CFR Part 21, Section 101, as amended in June 2000 as well as for amended type certificates and supplemental type certificates. AIA also does not understand how the aircraft noise certification test and measurement conditions specified in proposed Section A36.1.1 as effective on the date of the final rule correlate with the date for applicable noise standards as would be specified by the proposed modifications to 14CFR Part 21.

Some European certifying authorities have indicated that JAR 36, dated May 1997, which states in Subpart B, Section JAR 36.100 (a)(1) "the standards of this Subpart shall be applicable to ----- in respect of which the application for Type Certification or certification of Derived Version was accepted on or after 1 July 1996" satisfies the Annex 16 Chapter 1 Section 1.7 requirement regarding another equivalent procedure prescribed by the certifying authority. However, no reference is made to Section 1.7 of Chapter 1 of Annex 16. Moreover, JAR 21 makes no reference to acoustic changes or to supplemental type certificates. Therefore, AIA does not believe that the current NPRM proposal assures compatibility with either Annex 16 or JAR 36 regarding applicability dates for aircraft noise certification standards. AIA strongly believes that such compatibility needs to be achieved through appropriate efforts in ICAO CAEP Working Group 1 and appropriate FAR/JAR Harmonization Working Groups dealing with both FAR/JAR 36 and FAR/JAR 21 harmonization issues and encourages FAA to place high priority on

establishing initiatives to address the issues that are involved in achieving the desired compatibility goals.

The compatibility of applicability dates of noise certification standards to specific aircraft noise certification actions is also essential in regard to any new noise standards that might be approved by the ICAO Committee on Environmental Protection at the 5<sup>th</sup> meeting and subsequent meetings of this committee. Specifically, without such compatibility, reciprocal requirements for re-certification of aircraft to new noise standards may be established in a manner inconsistent with requirements set forth by regulations governing issuance of type certificates or changes thereof.

AIA also urges the FAA to reconsider harmonization on the issue of "Design characteristics that require different reference procedures". There may be instances where alternate reference procedures based on sound technical judgement and operational/environmental attributes could be accommodated in FAR part 36 that would comply with the intent of the existing rule (e.g. reference procedures for aircraft having specific steep approach and short field characteristics). This would provide more flexibility to the FAA and manufacturer in preventing the need for a costly rulemaking process.

- 2.1.5 **14CFR Part 36 guidance material**—FAA has indicated in the preamble to the NPRM their intent to publish Advisory Circular AC 36-4C along with the final 14CFR 14 Part 36 regulation. A review of an early draft of this Advisory Circular that the FAA has made available indicates that it is intended to be much more encompassing in explanations of the overall regulation requirements and intent and policy interpretations than the current ICAO Environmental Technical Manual guidance material which is focused primarily on the use of equivalent procedures. The FAA is encouraged to take two important and early-on steps regarding this document. First, a review of the draft clearly shows that there is important work to be done before it is published in coordination with manufacturers for buy-in of the document concept, followed by integration of all sections of the document so that it can be easily used by readers and applicants. Second, the document should be recommended by FAA for study by an ICAO Working Group 1 task group to consider for development of Internationally accepted guidance material on compliance with Annex 16 overall noise certification process.